

## MODULE VII

### CORRECTIVE ACTION PROGRAM

#### VII.A. APPLICABILITY

The Permittee operates radioactive waste disposal operations adjacent to the Mixed Waste Facility. Radioactive waste operations are conducted in accordance with the Utah Division of Radiation Control Radioactive Material License UT2300249, and U.S. Nuclear Regulatory Commission Radioactive Material License SMC-1559. Mixed waste operations are conducted in accordance with the state-issued Part B Permit and the Utah Division of Radiation Control Radioactive Material License UT2300249.

- VII.A.1. All corrective actions will occur unless otherwise specified by the Executive Secretary, in accordance with the licenses and permits listed in Condition VII.A.

#### VII.B. STANDARD CONDITIONS

- VII.B.1. Failure to submit the information required by Module VII or falsification of any submitted information is grounds for termination of this Permit in accordance with R315-3-16.
- VII.B.2. The Permittee shall sign and certify all plans, reports, notifications, and other submissions to the Executive Secretary in accordance with Condition I.G.
- VII.B.3. The Permittee shall submit a minimum of two copies of each plan, report, notification, or other submissions required within this Module to the Executive Secretary.
- VII.B.4. Upon written approval by the Executive Secretary, all plans and schedules required by the conditions of this Module, shall be incorporated into Module VII upon completion of an appropriate comment period. Any noncompliance with such approved plans and schedules may be subject to enforcement action.

- VII.B.4.a The Permittee shall submit all final reports to the Executive Secretary in the time frames specified. The final reports shall incorporate all comments from the reviews of preview drafts.
- VII.B.5. Upon written approval from the Executive Secretary, the Permittee may receive extensions of the specified compliance schedule due dates for the submittals required by this Module.
- VII.B.6 If the Executive Secretary determines that further actions beyond those provided by this Module, or changes to that which are stated herein, are warranted, the Permittee shall petition the Executive Secretary to modify this Module.
- VII.B.7 All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to conditions in this Module shall be maintained by the Facility for the effective term of this Permit, including any post-closure care period. These records shall be accessible to the Executive Secretary within one working day from the date of request.
- VII.C. RCRA FACILITY ASSESSMENT
- VII.C.1. When the Executive Secretary conducts a RCRA Facility Assessment (RFA) of the Permittee's Facility, it may include, but not be limited to the following:
- VII.C.1.a. File review;
- VII.C.1.b. Site inspection;
- VII.C.1.c. Sampling visits; and
- VII.C.1.d. Employee interviews.
- VII.D. RCRA FACILITY ASSESSMENT REPORT
- VII.D.1. The Executive Secretary shall compile a RFA Findings Report.
- VII.E. RCRA FACILITY INVESTIGATION

- VII.E.1. As required by the Executive Secretary, the Permittee shall conduct a RCRA Facility Investigation (RFI) to determine the nature and extent of known and suspected releases of hazardous waste or hazardous constituents to the environment, originating from any location at the Facility including a Solid Waste Management Unit (SWMU), as identified in the RFA, and to gather data to support the Corrective Action Plan (CAP). The Permittee shall conduct the RFI in accordance with the schedule specified in Table 1.
- VII.E.2. The Permittee shall prepare and submit the RFI Workplan (designated as Task II) to be reviewed and approved by the Executive Secretary. The Permittee shall then perform the RFI activities as specified in the approved workplan.
- VII.E.3. The RFI workplan shall include:
  - VII.E.3.a The Project Management Plan detailing a discussion of the technical approach to the investigation, schedules, milestone report and personnel;
  - VII.E.3.b. A Data Collection Quality Assurance Plan to establish and document all monitoring procedures;
  - VII.E.3.c A Data Management Plan to track investigation data and results;
  - VII.E.3.d A Health and Safety Plan for safe conduct of corrective action activities; and
  - VII.E.3.e A Community Relations Plan for the public dissemination of information.
- VII.E.4 Along with the RFI Workplan, the Permittee shall prepare and submit a Description of Current Conditions (designated as Task I) in accordance with the schedule in Table VII-1. The report shall include:
  - VII.E.4.a Background information gathered during previous investigations or inspections and other relevant data;
  - VII.E.4.b. Nature, extent, and rate of migration of contamination, if known; and
  - VII.E.4.c Past or current activities at the Facility.
- VII.E.5 The Permittee shall implement Task III of the approved RFI Workplan. The Permittee shall present data of adequate technical quality to support the

contention that no further action is required or the development and evaluation of corrective measures alternatives presented in the CAP. Task III shall consist of:

- VII.E.5.a Characterization of the environmental setting at the Facility, including the hydrogeology, soils, surface water, and air;
- VII.E.5.b Source characterization of all waste management areas at the Facility, including the nature of the unit and the type of waste place in the unit as described by chemical and physical characteristics;
- VII.E.5.c Contamination characterization, including analysis of hazardous waste or hazardous constituents from SWMUs and the effects of such hazardous waste or hazardous constituents, on groundwater, soils, surface water, air, subsurface gases; and
- VII.E.5.d Potential receptor identification describing the potential for human and environmental impact from contaminant exposure from the facility.
- VII.E.6 The Permittee shall prepare an analysis and summary of the RFI(s) including results. This task, Investigation Analysis, shall be designated as Task IV. The objective of Task IV shall be to ensure that the investigation data are sufficient in quality and quantity to describe the nature and extent of contamination, potential threat to human health and the environment, and to produce the CAP. Task IV shall consist of:
  - VII.E.6.a Data analysis of the type and extent of contamination at each SWMU including sources and migration pathways;
  - VII.E.6.b Protection standards for groundwater, soil, or other relevant protection standard;
- VII.E.7 The Permittee shall submit a schedule of activities and reports, to the Executive Secretary as required by Table 1 of this Module.
- VII.F. INTERIM MEASURES AND VOLUNTARY CLEAN UP ACTIONS
- VII.F.1 If, during the course of any activity initiated in compliance with the conditions of this Module, the Executive Secretary or the Permittee determines that a

release or potential release of hazardous waste or hazardous constituents from a SWMU poses a threat to human health and the environment, the Permittee shall perform specific interim measures.

- VII.F.1.a If any release or potential release of hazardous waste or hazardous waste constituents poses an immediate danger to the human health or the environment, the Permittee shall inform the Executive Secretary at once. The Executive Secretary may then require corrective action to be implemented without delay.
- VII.F.2. The Executive Secretary shall notify the Permittee in writing of the requirement to perform the interim measures specified in the Interim Measures Plan, in accordance with Condition VII.F.3.
- VII.F.3. Within 30 calendar days of receiving the written notification requiring the Interim Measures Plan as specified in Condition VII.F.2, the Permittee shall provide the Interim Measures Plan to the Executive Secretary for approval. The Interim Measures Plan shall include the following:
  - VII.F.3.a. Mitigation of potential threats to human health and the environment that is consistent with and integrated into any long term solution at the Facility;
  - VII.F.3.b. Data collection quality assurance and data management information;
  - VII.F.3.c. Design plans and specifications, construction requirements, operation and maintenance requirements, project schedules, and final design documents;
  - VII.F.3.d. Construction quality assurance objectives, inspection activities, sampling requirements, and documentation; and
  - VII.F.3.e. Schedule for submittal of the following reports; progress reports, interim measures workplan, final design documents, draft interim measures report, and final interim measures report.
- VII.F.4. The Permittee shall perform the requirements of the Interim Measures Plan.
- VII.F.5. The Permittee may propose to initiate voluntary interim measures in accordance with Condition VII.F.6.

- VII.F.6. In determining whether an interim measure may be considered voluntary, the Permittee shall evaluate the following:
  - VII.F.6.a. Time required to develop and implement a final remedy;
  - VII.F.6.b. Actual and potential exposure of human and environmental receptors;
  - VII.F.6.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;
  - VII.F.6.d. The potential for further degradation of the medium absent interim measures;
  - VII.F.6.e. Presence of hazardous constituents(s) in containers that may pose a threat of release;
  - VII.F.6.f. Presence and concentration of hazardous constituents(s) in the soils that have the potential to migrate to groundwater or surface water;
  - VII.F.6.g. Weather conditions that may affect the current levels of contamination;
  - VII.F.6.h. Risks of fire, explosion, or accident; and
  - VII.F.6.i. Other situations that may pose threats to human health and the environment.
- VII.F.7. If the Executive Secretary disagrees with the Permittee's proposed voluntary interim measures, the Permittee shall follow the requirements of Condition VII.F.3.
- VII.G. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNITS
  - VII.G.1. The Permittee shall notify the Executive Secretary in writing of any newly identified SWMU(s) not identified in the RFA, within 30 calendar days of discovering the SWMU(s). The notification shall include the location of the new SWMU(s) and information on the suspected or known wastes at the site.
  - VII.G.2. Within 150 calendar days following a request from the Executive Secretary for a SWMU Assessment Plan for any newly discovered SWMU, the Permittee shall submit a SWMU Assessment Plan to the Executive Secretary.

- VII.G.3. The SWMU Assessment Plan shall include:
  - VII.G.3.a. A description of past and present operations at the units(s); and
  - VII.G.3.b. Any groundwater, surface water, soil (surface or subsurface strata), or air sampling and analysis data needed to determine whether a release of hazardous constituents(s) from such units(s) is likely to occur. The SWMU Assessment Plan shall demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and shall include parameters sufficient to identify migration of hazardous constituent(s) from the newly discovered SWMUs to the environment.
- VII.G.4. The SWMU Assessment Plan shall be evaluated by the Executive Secretary and;
  - VII.G.4.a. The Permittee shall receive written approval from the Executive Secretary for the SWMU Assessment Plan; or
  - VII.G.4.b. The Permittee shall receive written notice from the Executive Secretary of the SWMU Assessment Plan's deficiencies and the written notice will specify a due date for submittal of a revised assessment plan; or
  - VII.G.4.c. The Permittee shall receive written notice from the Executive Secretary of the revisions incorporated by the Executive Secretary in the SWMU Assessment Plan. The revised assessment plan shall become the approved SWMU Assessment Plan.
- VII.G.5. The SWMU Assessment Plan, as approved by the Executive Secretary specified in Condition VII.G.4., shall be incorporated within Module VII.
- VII.G.6. The Permittee shall implement the approved SWMU Assessment Plan within 30 calendar days of receiving written notice of the approval by the Executive Secretary. The assessment shall be completed according to the schedule on the SWMU Assessment Plan.
- VII.G.7. Within 30 days of completion of the assessment, the Permittee shall submit a SWMU Assessment Report to the Executive Secretary.

- VII.G.8. The SWMU Assessment Report shall provide all results obtained from the implementation of the approved SWMU Assessment Plan, including:
  - VII.G.8.a. The SWMU location, identified on a map;
  - VII.G.8.b. The type and function of the unit, including general dimensions and a structural description;
  - VII.G.8.c. The period during which the unit was operated; and
  - VII.G.8.d. A list of all wastes managed at the SWMU and results of all sampling and analysis used to determine whether releases of hazardous waste or hazardous constituents has occurred, are occurring, or are likely to occur from the unit.
- VII.G.9. Based on the results of the SWMU Assessment Report, the Executive Secretary shall determine the need for further investigations at specific SWMUs included in the SWMU Assessment Report. If the Executive Secretary determines that such investigations are needed, the Executive Secretary shall require the Permittee to prepare a RCRA Facility Investigation Workplan in accordance with Condition VII.E.
- VII.H. DETERMINATION OF NO FURTHER ACTIONS
  - VII.H.1. At any time during an investigation of a SWMU, the Permittee may petition the Executive Secretary for a determination of no further action (NFA).
  - VII.H.2. The NFA petition shall contain information based on the SWMU Assessment Report, the RFI or any other information that demonstrates that:
    - VII.H.2.a. Hazardous waste or hazardous constituents are not detected; or
    - VII.H.2.b. Hazardous waste or hazardous constituents have been detected, but are below background concentrations; or
    - VII.H.2.c. Hazardous waste or hazardous constituents have been detected, but do not pose a threat to human health or the environment.
  - VII.H.3. A determination of NFA, in accordance with Condition VII.H.1, shall not preclude the Executive Secretary from requiring further investigations, studies,



or remediation at a later date if new information or subsequent analysis indicates a release or potential of a release from a SWMU at the Facility. In such a case, the Permittee shall modify the Corrective Action Schedule of Compliance of Table 2.

VII.I. CORRECTIVE ACTION PLAN

VII.I.1. Based on the results of the RFI, the Permittee shall submit to the Executive Secretary for review and approval a Corrective Action Plan (CAP) for all SWMUs that have been identified to have a release of hazardous waste or hazardous constituents, in accordance with the schedule specified in Table VII-2 of this Module. The CAP shall include:

VII.I.1.a. Target cleanup objectives;

VII.I.1.b. Corrective actions (s) that shall satisfy target cleanup objectives;

VII.I.1.c. Summary of all corrective measure alternatives examined for the CAP; and

VII.I.1.d. Schedule for implementation of the corrective action(s) according to the timeframe and schedule contained in Module VII.

VII.I.2. Within 30 days upon receipt of Executive Secretary comments, the Permittee shall modify the CAP or submit a new CAP for the Executive Secretary's approval.

VII.I.3. The Executive Secretary shall consider performance, reliability, implementability, safety, human health, and the environment impact of the measure(s) in approving the CAP.

VII.I.4. Upon approval of the CAP, the Permittee shall implement the corrective action(s) according to the schedule as approved in the CAP. The approved schedule for the CAP shall be incorporated in Table VII-2, Corrective Action Compliance Schedule.

VII.I.5. The Permittee shall furnish or retain all personnel, materials, and services necessary for the implementation of the CAP.

VII.J. REPORTING REQUIREMENTS

- VII.J.1. The Permittee shall submit to the Executive Secretary written quarterly progress reports of all activities conducted after the effective date of the approved CAP. The Permittee shall submit the first quarterly progress reports no later than 90 calendar days after the effective date of the approved CAP.
- VII.J.2. The quarterly progress reports shall contain:
  - VII.J.2.a A description of the work completed;
  - VII.J.2.b Summaries of all findings and all raw data;
  - VII.J.2.c Summaries of all problems encountered during the reporting period and actions taken or to be taken to rectify problems; and
  - VII.J.2.d Projected work for the next reporting period.
- VII.J.3. The Permittee shall maintain copies of the reports, drilling logs, and data at the Facility during the effective period of this Permit.

**TABLE VII-1**

**RCRA FACILITY INVESTIGATION COMPLIANCE SCHEDULE**

<b>Activity</b>	<b>Due Date</b>
1. Submit Task I – Current Conditions	Within 180 days of the detection of contamination or directive from the Executive Secretary
2. Submit Task II – Draft RFI workplan and schedule	Within 90 days from submission of Task I Current Conditions Report
3. Begin Task III – Facility Investigation according to the approved Task II RFI workplan and schedule	Within 60 days of Executive Secretary's approved Task II RFI workplan and schedule
4. Submit Task IV – Investigation Analysis	As indicated in the Executive Secretary's approved Task II RFI workplan and schedule
5. Submit Tasks III and IV Summary and Final Reports	As indicated in the Executive Secretary's approved Task II RFI workplan and schedule

**TABLE VII- 2**  
**CORRECTIVE ACTION COMPLIANCE SCHEDULE**

<b>Facility Submission</b>	<b>Due Date</b>
1. Draft CAP	Within 180 days of the Executive Secretary's approval of the final RFI Report
2. Final CAP	Within 60 days of receiving the Executive Secretary's comments on the Draft CAP
3. CAP Construction and implementation reports	As specified in CAP as approved of by the Executive Secretary
4. Draft CQA (Construction Quality Assurance) program plan	Prior to construction
5. Final CQA (Construction Quality Assurance) program plan	Within 60 days of the Executive Secretary's approval of draft CQA plan
6. Construction of corrective measures	As approved in the final CAP plan
7. Construction certification inspection	As approved in the final CQA plan
8. Corrective measure construction report	90 days following completion of construction
9. Progress Reports	Quarterly within 90 days after the CAP is approved